



# What is an Ecosystem?

## Lesson 2 - Nature Journaling!

### Essential Questions:

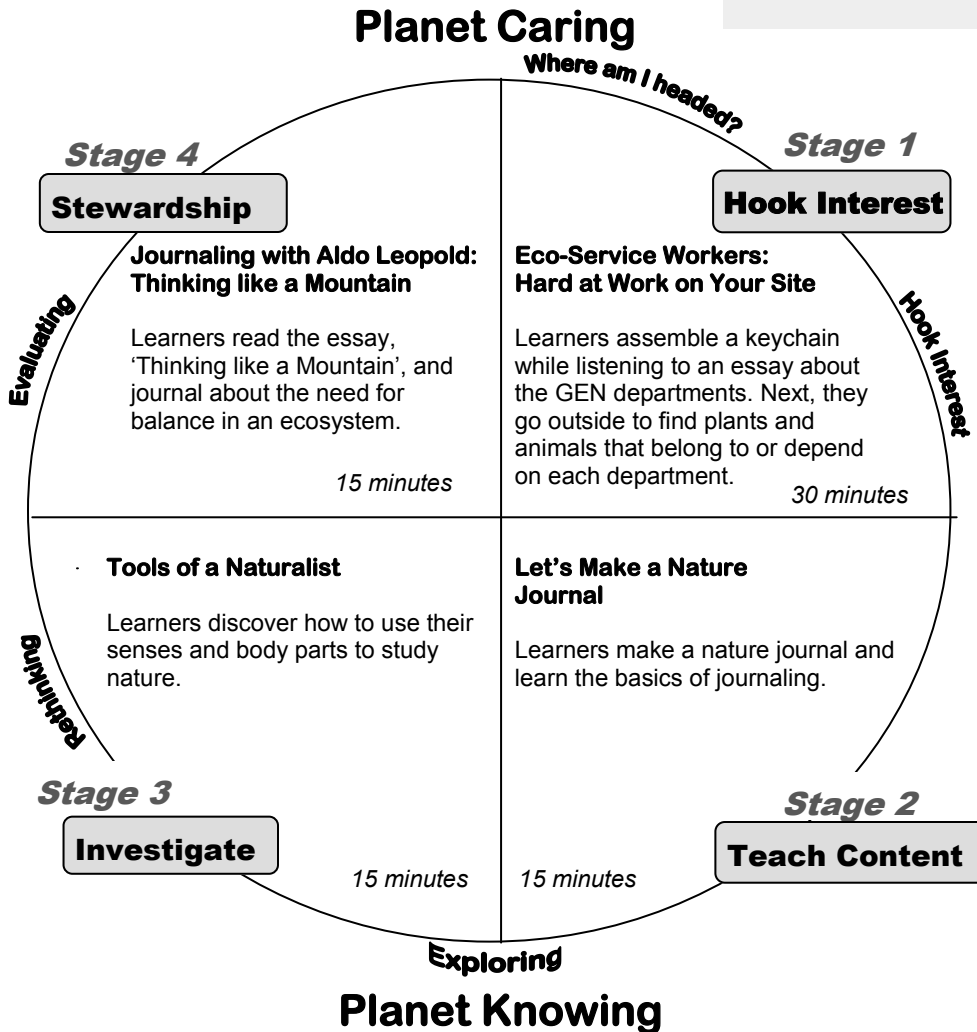
- How is a nature journal used in science inquiry?*
- How are species interconnected?*
- How does the loss of one species impact the whole ecosystem?*

### At a Glance:

Learners deepen their knowledge of the eco-service departments by listening to a story of possible happenings on their school site. They assemble a keychain while listening to the story. Next, learners make a nature journal and participate in two journaling activities. They learn how to use their senses to study nature, then read and respond to an essay by Aldo Leopold, a famous naturalist and journal writer.

### Concepts:

- Healthy functioning ecosystems maintain life in balance on Garden Earth.
- Although the type of ecosystems varies around the world, all ecosystems are important for maintaining a healthy planet.
- There are seven eco-services or life-support functions provided by planet Earth.
- Human activities can create stresses that alter normal ecosystem functions, and impair life support functions.



### Objectives

Learners ...

- 1) describe the Garden Earth Departments.
- 2) identify organisms that help provide eco-services on their school site.
- 3) identify organisms who depend upon the eco-services on their school site.
- 4) make a nature journal.
- 5) communicate facts and feeling by writing in a journal.
- 6) discover how to use their senses and body parts to study nature.
- 7) review some of the history of journaling.
- 8) learn about the famous naturalist, Aldo Leopold.
- 9) understand the critical balance of an ecosystem.

## PROCEDURES IN BRIEF: Lesson 2—Nature Journaling!

### Stage 1. Eco-Service Workers: Hard at Work on Your Site

#### Procedure:

##### Part A

1. Provide each student with their supplies.
2. Have learners attach the string to the split key ring.
3. Learners will assemble their beaded key chain as they listen to the essay. Either the instructor or the learners read the essay.
4. Before you say the Department name, have learners guess which department it would be.
5. Once the essay is complete, learners may finish assembling their key chain. Tie off the end of the string with the beads.
6. Attach the lanyard hook-clip to the split key ring.
7. Lastly, attach the lanyard hook-clip to the GEN pie logo disc.

##### Part B

1. Use the beaded key chains to review the GEN Departments and the function of each with your learners.
2. Use photos of Department workers to discuss organisms that both depend upon these services and help provide these services on your school site.
3. Learners go outside and complete one of the worksheets as they hunt for eco-services on their site.

#### Supplies

- **Script:** Garden Earth Naturalist: Daily Log
- Beads
- string
- split key ring
- lanyard hook-clip
- GEN pie logo disc
- small baggie or cup for each child
- pictures of GEN Department workers
- worksheets

### Stage 2. Let's Make a Nature Journal

#### Procedure:

1. Cut two pieces of cardstock to desired size.
2. Have learners decorate the front and back covers of their journal using colored pencils, crayons, markers, pressed leaves and flowers, nature quotes, magazine collage, etc.
3. Laminate covers to reduce wear when using outside.
4. Insert blank journal pages or other GEN journal activities.
5. Punch holes using a 3-hole punch and fasten using metal clasp rings or yarn.

\* Technical nature journal includes specific information about each journal entry. Start the journal session by writing down these basics then expanding on a particular area.

- site name/location
- date
- time of day
- temperature
- weather conditions: for example: is it cloudy, sunny, windy, raining?
- wind conditions

#### Supplies

- 2 sheets of Cardstock
- paper (typing)
- hole punch
- 3 metal clasp rings or yarn
- colored pencils, markers, or crayons
- optional: dried plants, magazines, glue, nature quotes
- laminant
- pencil

### Stage 3. Tools of a Naturalist

#### Procedure:

1. Discuss the history of nature journaling with learners and how it has enhanced scientific study.
2. Introduce the topic of 'Tools of a Naturalist' and how nature may be studied without any specific tools.
3. Allow learners to find a quiet place outside with their journals and/or 'Tools of a Naturalist' worksheet. To start, have learners record the date, time, and surroundings of their journal entry.
4. Give learners time to read through and complete the journaling activity.
5. Gather learners back together and allow those who want to share to discuss their journal entries.

#### Supplies

- Journal or 'Tools of a Naturalist' worksheet
- Pencil or pen

*Naturalists use many tools in studying nature, such as binoculars, cameras, tape recorders, rulers, tweezers, and most important, journals. You don't necessarily need all these physical tools to go out and study nature because you already have them in or on your body. For example, your eyes are your binoculars and camera, your ears can listen for sound, and your fingers are great tweezers. How else can you use your senses or body parts to study nature? Make a list of your senses and body parts that may be useful in studying nature. Then write how they are used to explore your outside world. After you have discovered the great tools you have, go outside and use them. Use all of your tools to write about the day and what you see around you. I think I just felt something blow in my "Wind Detector" (my hair)!*

### Stage 4. Journaling with Aldo Leopold: Thinking Like a Mountain

#### Procedure:

1. Read and generally discuss the essay, "Thinking Like a Mountain," with learners.
2. Tell learners that many naturalists make use of a quiet, natural area to reflect on their surroundings or be inspired by their own thoughts.
3. If possible, take the learners to a quiet area on the school site. Have them spread out, so other learners do not distract each other.
4. Pass out the 'Aldo Leopold Journaling Worksheet'.
5. Have learners reflect on the essay. How was each aspect of the ecosystem affected by the killing of the wolf?
  - The wolf population?
  - Deer and other wolf prey?
  - Vegetation?
  - The river?
  - The air?
  - The mountain as a whole ecosystem?
6. Give the learners 15-20 minutes to reflect and write. They may also draw a picture to express the affects of the wolf's death.
7. Gather learners back together to discuss reflections as a group.

#### Supplies

- Journals or Worksheet
- Pencil
- Optional: colored pencils